

Ideas of Value to Car Workers

Mechanical Assistant Helps in Taking Nuts from Oil Pan Bolts—Mica Tests Plugs for Internal Shorts

AS IT is impossible on most cars for one man to reach both the bolts and the nuts on the oil pan from one position, it is common practice to have an assistant remove the pan. Figure 3, at right, shows how to make a mechanical assistant. The counterweight at the end of bar *B* holds the socket wrench in place and a properly placed foot will keep it from turning.

A SPARK plug that functions in the open air may not work in the cylinder because the compressed charge of gas offers greater resistance to the spark than does air at atmospheric pressure. Figure 1, below, shows how to test a plug for internal shorts. Placing the mica as shown increases the gap and the spark jumps internally if the plug is defective.

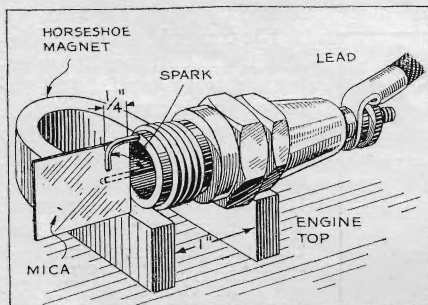


Fig. 1. Mica, placed as above, can be used to make a sure test of plugs for internal shorts.

WHEN air pressure is available, the simple method shown in Fig. 2, below, permits quick changes of the valve springs on overhead motors. The piston should be set exactly at top dead center before the air pressure is applied. The valve stem can be fitted to a spark plug of the take-apart type.

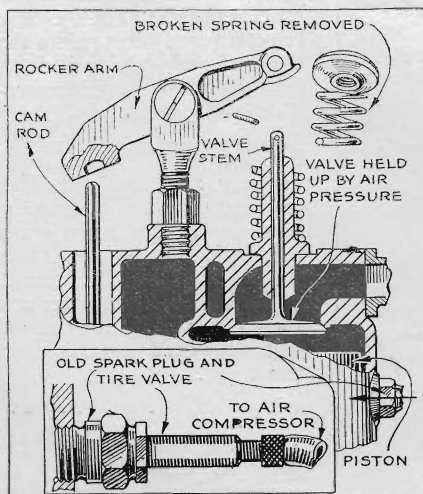


Fig. 2. Air pressure used to make a quick change of valve springs on overhead motor.

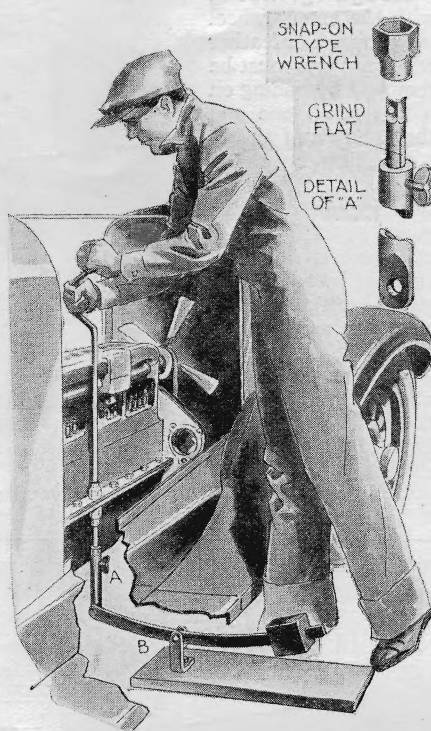


Fig. 3. Time and effort are saved by rigging mechanical assistant in turning oil pan nuts.

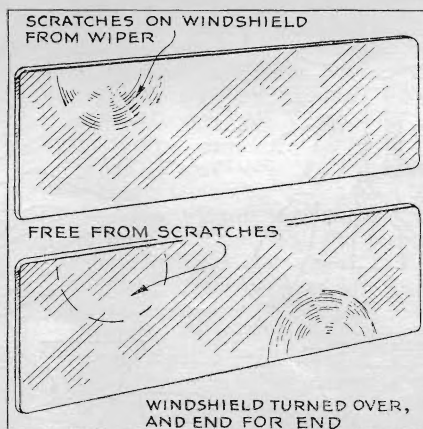


Fig. 4. Turning the windshield over and end for end gets scratches out of driver's vision.

AFTER a car is a year or two old, the owner discovers that the windshield glass in the path of the windshield wiper is covered with minute circular scratches that catch and reflect the light and so interfere with vision. These scratches are caused by tiny particles of sand from the road which are rubbed back and forth by the wiper, the rubber itself not being capable of causing scratches. Figure 4, above, shows how to make the windshield last longer by placing the scratched portion where it is not in the line of the driver's vision.

POPULAR SCIENCE MONTHLY awards each month a prize of \$10, in addition to regular space rates, for the best idea sent in for motorists. This month's prize goes to R. A. Mercier, Pennacook, N. H. (Figure 3). Contributions are requested from all auto mechanics.

THE principal cause of valve sticking is hard carbon deposited on the valve stems and in the valve guides. The carbon on the stems can be removed easily with a dull knife and the stems polished with crocus cloth. Figure 5, below, shows an easy way to remove the carbon deposit from the valve guide. Brass wire brushes to fit any size bore from a quarter inch to a half inch in diameter can be purchased in any sporting goods store.

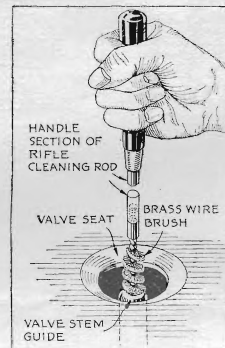


Fig. 5. With the use of this wire brush carbon is cleaned from the valve guide.

FIGURE 6, below, shows how to make a common flashlight into a circuit tester without spoiling it as a flashlight. Cut off the bottom end of an old flashlight and solder it to the cap as illustrated. The spring is insulated from the bottom cap by one or two fiber washers.

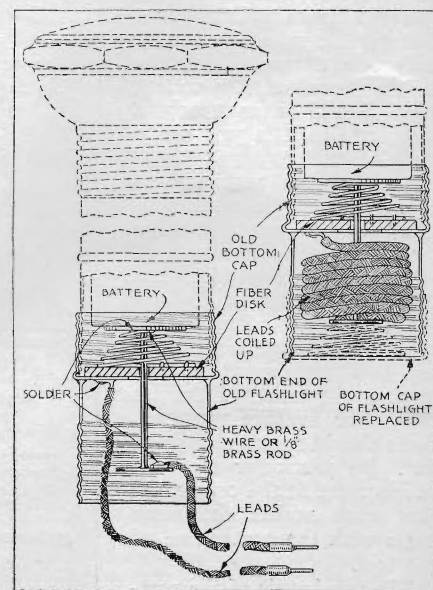


Fig. 6. How a flashlight can be used to test a circuit without spoiling it as a flashlight.